

Heating Up Your Downwind Sailing

Written by Andrew Campbell

Friday, 01 June 2007 00:00 - Last Updated Friday, 16 July 2010 14:51

(Note: This article also appears in the Summer 2007 edition of The Laser Sailor)

We have all felt slow downwind at some point in our Laser sailing careers. Luckily for all of us, downwind sailing is the single easiest place to make lasting impacts in our overall game. Very few people, maybe ten in the world at any given time can really be called experts in the field of downwind Laser sailing. So, be not afraid, you are not alone if you feel like you could use some work. We all can use help, and happily, we all can improve. Here are three quick and easy ways to make strides towards better downwind sailing. First, try sailing wider, broader, and hotter angles. Second, look for breeze instead of worrying so much about technique. And third, get off your butt and put your weight on your toes. Before you laugh me off and thumb away to another article, let me explain...

Heat it up, or down

Often the biggest difference between fast and average downwind sailing is in the angles. It is common Laser jargon to talk a lot about the magic S-turn as the “be all and end all” of going well off the breeze. Why do we use the S-turn? Rationally isn't the fastest path between the windward mark and the leeward mark a straight line between the two? How can a bunch of scalloping turns possibly be a good thing? Yes. That's the simple answer. No matter how you look at it, the kinetic nature of the Laser demands movement and angle change to jumpstart VMG. However, instead of describing with great amounts of vague language and useless description of “feel,” there is one trick to consider a starting point for better speed: sail bigger angles. If we sail the boat dead downwind, hanging onto the centerboard and sitting on our butts, the boat will likely be slower than potential target speed the majority of the time.

When the boat feels slow try bearing away a bit, and sailing further by-the-lee, or heading up a bit to a broad reach. What should happen is that the angle change in the boat's direction causes the apparent wind over the sails will increase as you sail relatively closer to the true wind angle. The Laser, like any other boat, likes sailing these broader angles off the breeze. Unfortunately, especially in flat water, it is very common to see Lasers cruise down a leg without ever changing course away from the mark. In almost every other class in the world it is common knowledge that in most conditions you must sail proper gybing angles in order to get the most performance out of the boat. The beauty of the Laser is that you can sail both gybing angles on both gybes. We do not have to gybe in order to sail 45 degrees of angle away from dead-downwind thanks to by-the-lee sailing. So use it! If you find yourself going slow... sail hotter. Take it up, or deeper, which every makes the most sense strategically, but make that apparent wind do the work for you. This may demand some changes in your control settings. For instance that boom vang might have to be cracked off a bit in order to sail deeper. Inversely, the vang may have to be tightened slightly to sail a faster broad reach. Try not to over do it at first. Try it in practice and see what you feel comfortable with, and then go a little bit looser to see what your made of. Usually improvements in sailing are made in the realm of the uncomfortable. Never be afraid to try things slightly more out of your control. Practice until you know where your boundaries are,

Heating Up Your Downwind Sailing

Written by Andrew Campbell

Friday, 01 June 2007 00:00 - Last Updated Friday, 16 July 2010 14:51

and the enhanced speed will eventually show.

Keep your head on a swivel

One of the best ways to make yourself look like a fantastic downwind ace is to sail your boat in more wind. If it were only that simple, right? It can be.

With all the technique in the world, it is impossible to win without decent tactical awareness of what is happening to the breeze. That is why it should be more emphasized when talking about downwind technique to keep your head on a swivel looking upwind behind you for changes in breeze and downwind in front of you for potential waves to ride. Often clinicians and coaches will talk and talk and talk about ownwind technique and feel that is possible for everyone to understand and pick up after years of practice and competition. This is fine, and often times can lend small points toward the improvement of sailor's downwind speed. If you sail in the puffs with mediocre technique on the same course as Larry Laser Ace with great technique, but Larry is in a lull, it is almost guaranteed that you are going faster. Often times the guys with good technique are better at sailing in better breeze because both skills develop after more time on the water. But, it is important to acknowledge the role that wind-spotting and wave-finding can play in successful downwind sailing.

By looking aft every fifteen or twenty seconds, not only do we make sure that we have clear lane, but we can also see puffs coming down the racecourse. When we do see puffs that we can sail into, now is a good time to employ our recently gained skill of sailing deeper, or reaching hotter across the leg to get into that breeze. It might not be fast to reach all the way across from one side of the leg and back ten times in a leg, but having the skill set necessary to heat it up and get into a little extra breeze can make a big impact on perceived downwind speed. By sailing in more breeze on average, you will get comments like: "Hey, Ralph, you're extra hundred hours last month working on downwind sailing have really paid off!" Ralph, meanwhile is snickering to himself, because he was just sailing in more wind. By keeping your eyes out of the boat, looking around for darker water, Ralph can come across to the rest of the fleet as having some Robert Scheidt-style talent. The most basic principle in sailing is that more wind equals more boatspeed. The Laser is no exception. Use your eyes to your advantage, search out breeze and watch the downwind speed improve.

Get off your butt

Next step to better downwind sailing is to use your legs. "What!?" You may be asking yourself. No joke, and I hate to break it to you, but you may start feeling the burn in your legs on the downwind legs now too. And, it is for the better. By concentrating the majority of our body weight in about eight knots or more onto the balls of our feet instead of our butts on the rail we can drastically improve the kinetic power of the boat. Taking the weight off the rail under your butt and putting it into the floor under your feet can make a significant difference in how you feel your boat's natural rock and turn in the waves and water. In lighter wind conditions it may indeed be necessary to hook your leg under the hiking strap in order to heel the boat over. That

Heating Up Your Downwind Sailing

Written by Andrew Campbell

Friday, 01 June 2007 00:00 - Last Updated Friday, 16 July 2010 14:51

is fine, but in breeze where the boat will heel itself over just on by-the-lee pressure on the mainsail, it then becomes necessary to actively counter that energy with pressure from your toes and legs into the bottom of the cockpit, and maybe a hand on the leeward rail at times. Finn sailors and Laser sailors alike have the same conundrum, and I heard this concept from a Finn sailor, and did not even realize that I was doing it. Whenever you feel as though you are getting slow, often times it coincides with a moment of sloth in your body's activity level. If we shift the weight off of our rear-ends and into our feet we can then sail deeper and with more pressure against our sails (a point of possible improvement conveniently listed earlier in this article). More pressure in the mainsail is a symptom of more apparent wind and speed is an unavoidable consequence of more apparent wind!

Get out and try it

Of course, all downwind speed comes from experience and experimentation. If you are willing to spend time concentrating on downwind sailing, and trying things outside of your comfort zone, then you will find yourself able to improve. This is true for any aspect of your sailing. It is also important to know that there are a thousand other details involved with downwind sailing that can lead to increased speed. You know the vast majority of them, but the three tricks in this article are just three that sometimes get overlooked in Laser sailing. Don't be fooled by the by-the-lee dinghy. Sailing the downwind angles is still necessary and sailing in the most breeze on the racecourse is still necessary. The last point is to keep on your toes. This is an important one. As you experiment and strive to improve, you may find the boat getting wobbly and might find your boat upside down from time to time. Don't fret, you are not alone in the desire to improve, and you're not the only one turning over. I turned over three times in one practice last month preparing for the World Championships in Portugal. A quick grimace turns into a smile as we learn from how fast the boat felt just before the capsize. Keep up the good work, spend the time on the water and the improvements will come.

About the author: Andrewv Campbell is no stranger to our regular Laser Sailor readers. As a member of the US Sailing Team, Andrew is currently on the campaign trail and was able to squeeze in this technical article between practice sessions. For more information, sailing advice and a look into daily life on the campaign trail, visit www.campbellsailing.com.